

FIG. 1

|             | R   | G   | B   | 256 LEVELS | 8 LEVELS |
|-------------|-----|-----|-----|------------|----------|
| W (WHITE)   | 255 | 255 | 255 | 255        | 7        |
| Y (YELLOW)  | 255 | 255 | 0   | 225        | 7        |
| C (CYAN)    | 0   | 255 | 255 | 178        | 5        |
| G (GREEN)   | 0   | 255 | 0   | 149        | 4        |
| M (MAGENTA) | 255 | 0   | 255 | 105        | 3        |
| R (RED)     | 255 | 0   | 0   | 76         | 2        |
| B (BLUE)    | 0   | 0   | 255 | 29         | 0        |
| K (BLACK)   | 0   | 0   | 0   | 0          | 0        |

FIG. 2

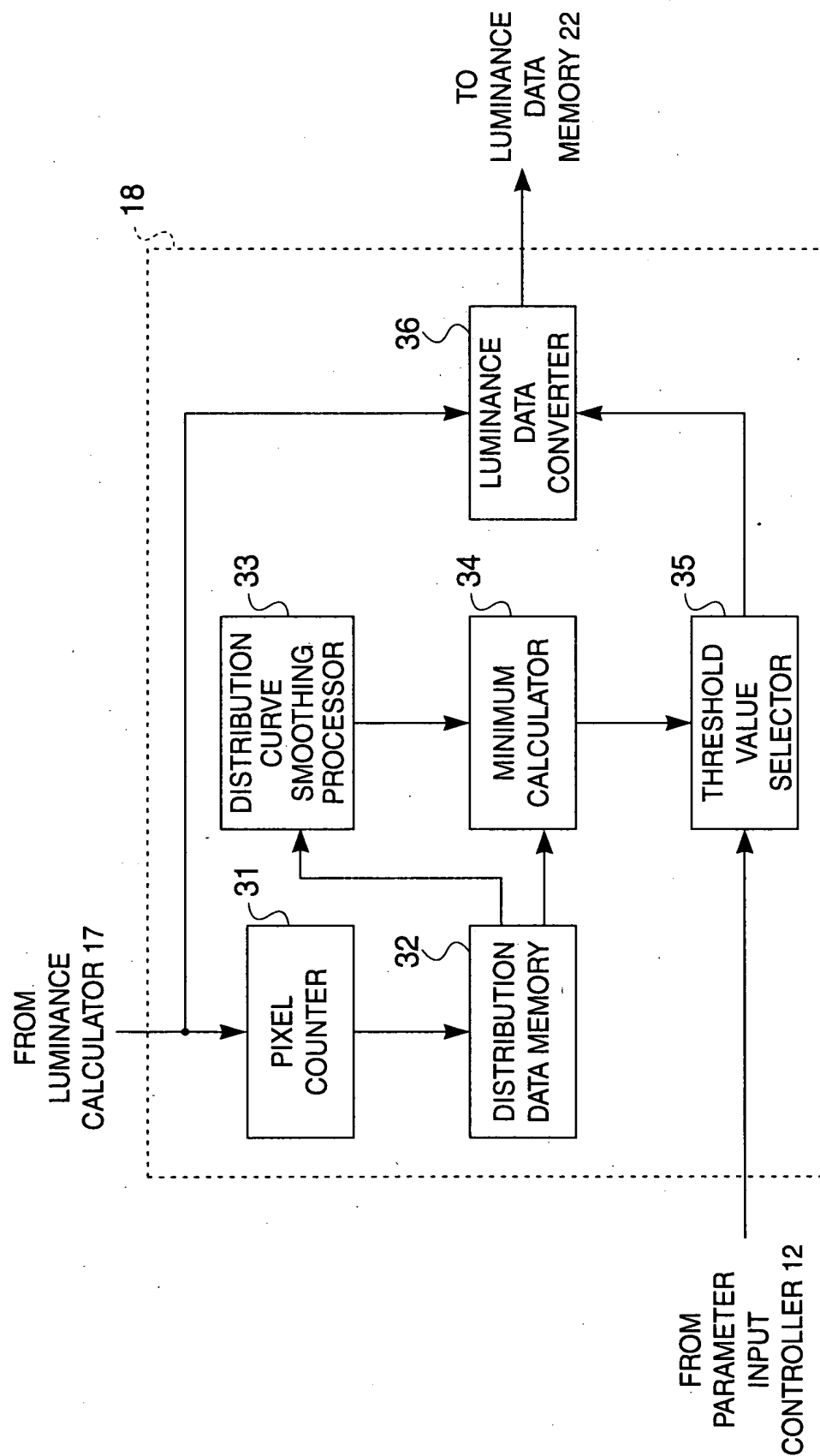


FIG. 3

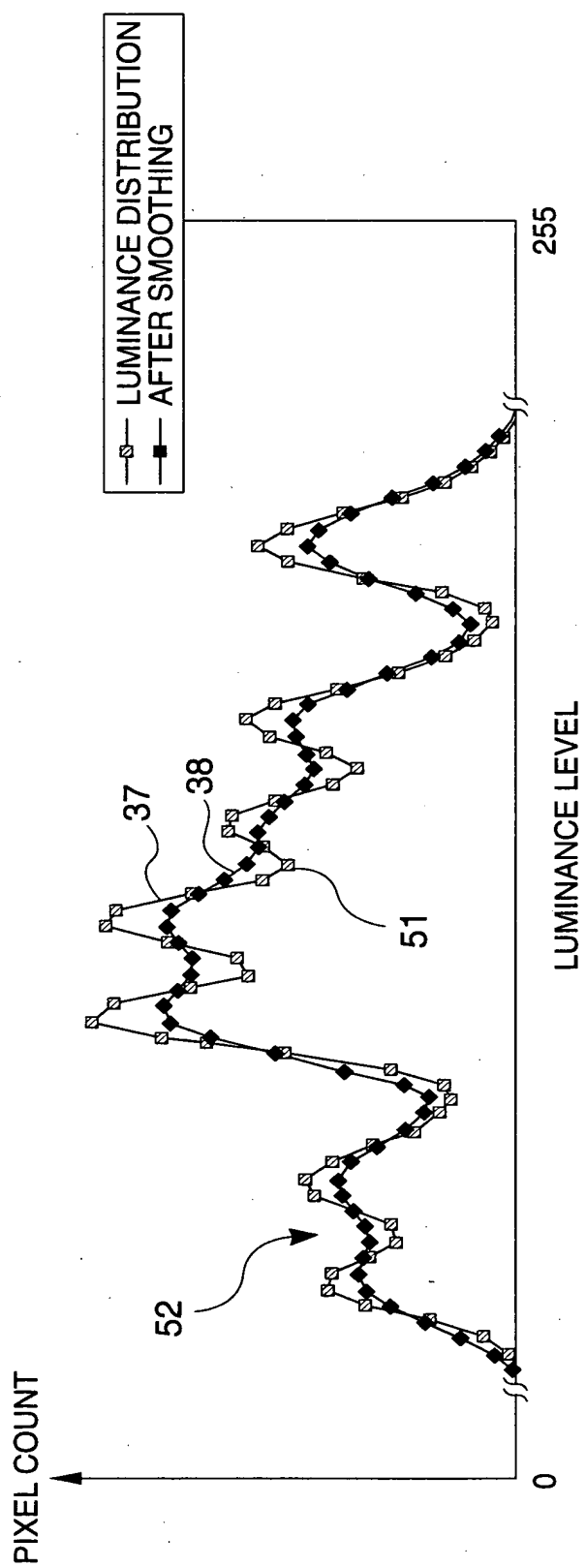


FIG. 4

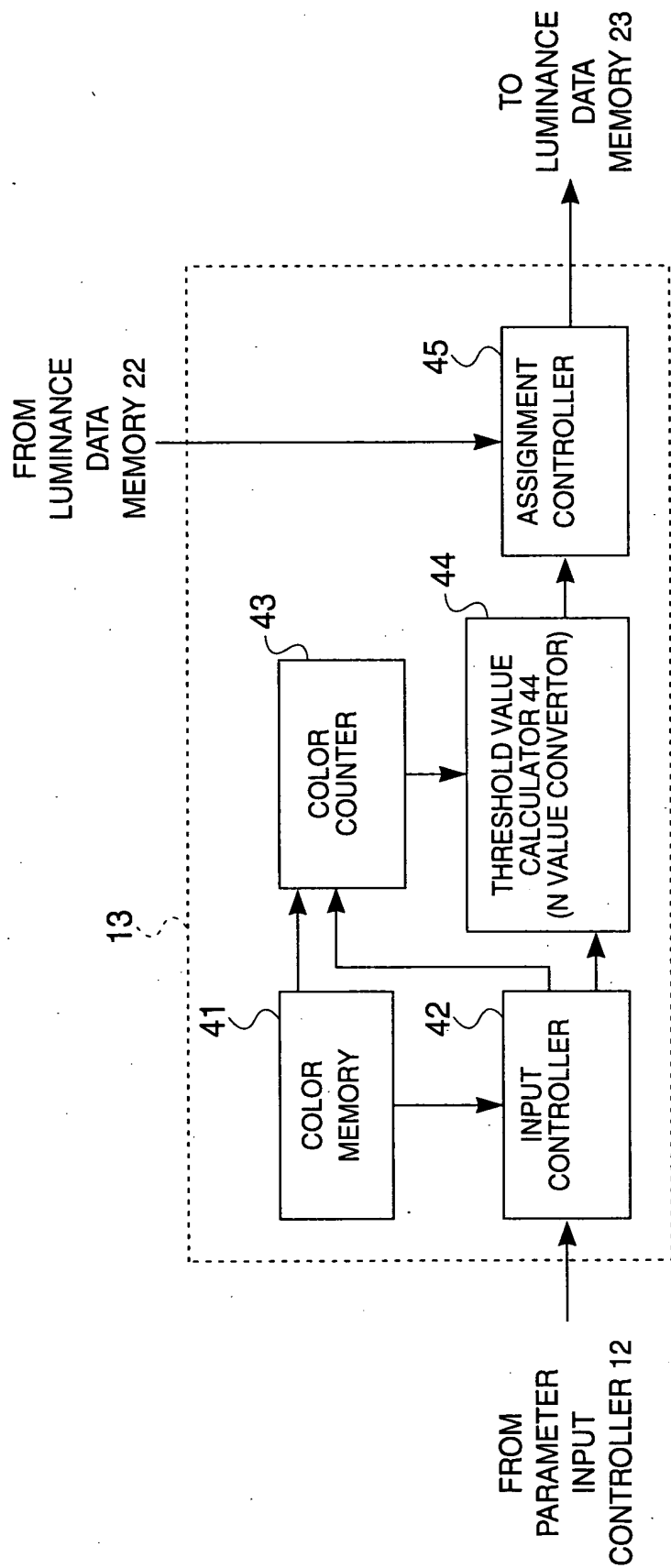


FIG. 5

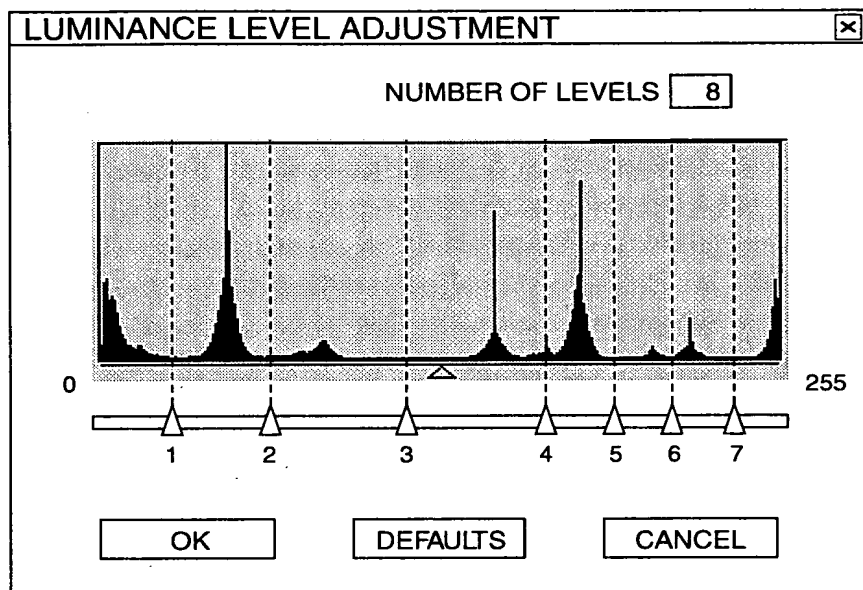
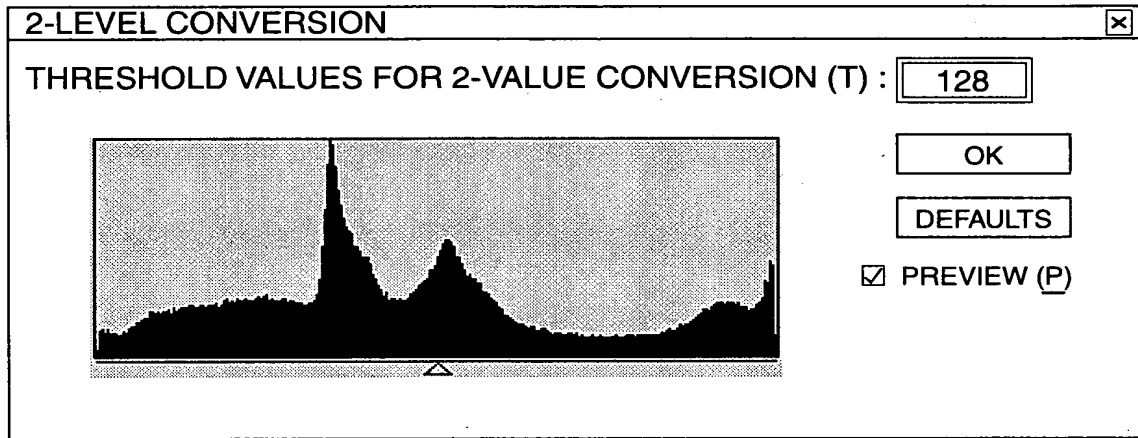
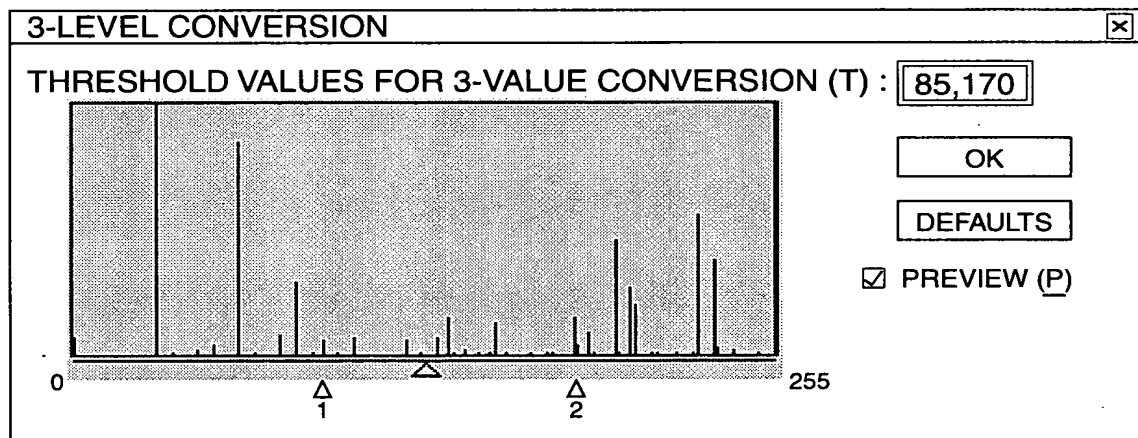


FIG. 6



(a)



(b)

FIG. 7

10005157-121001

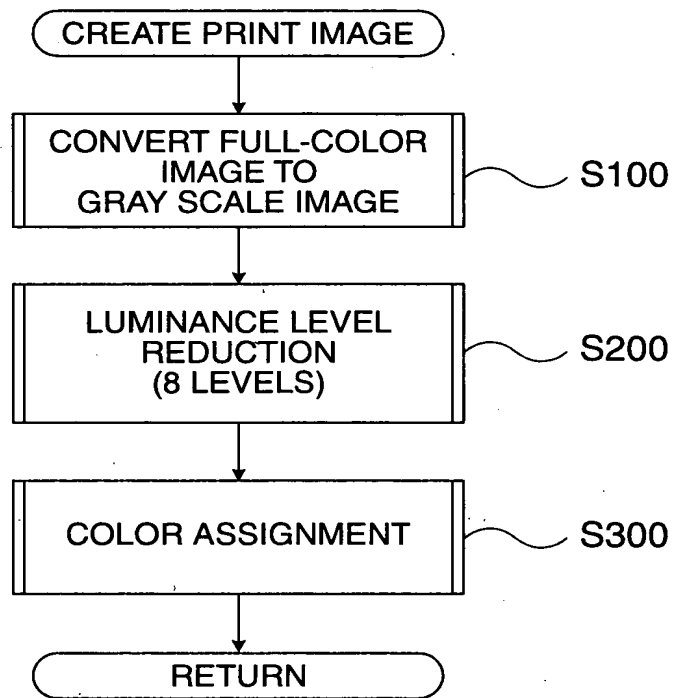


FIG. 8



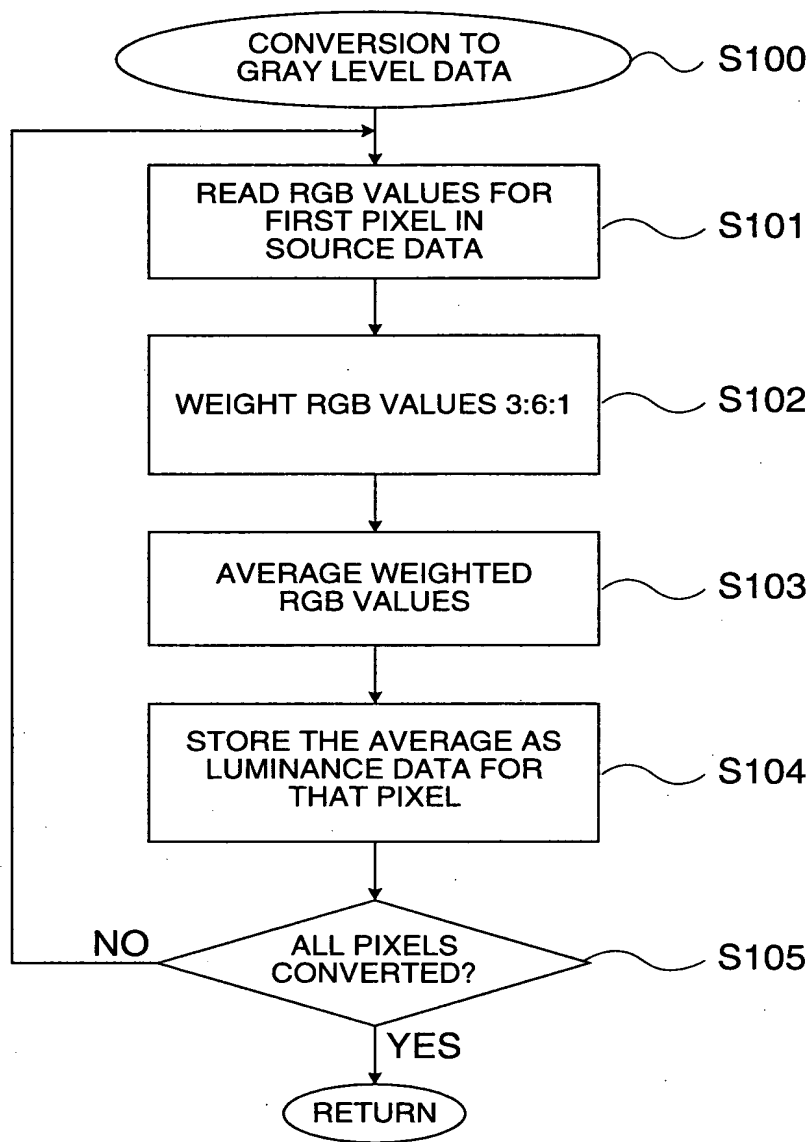


FIG. 9

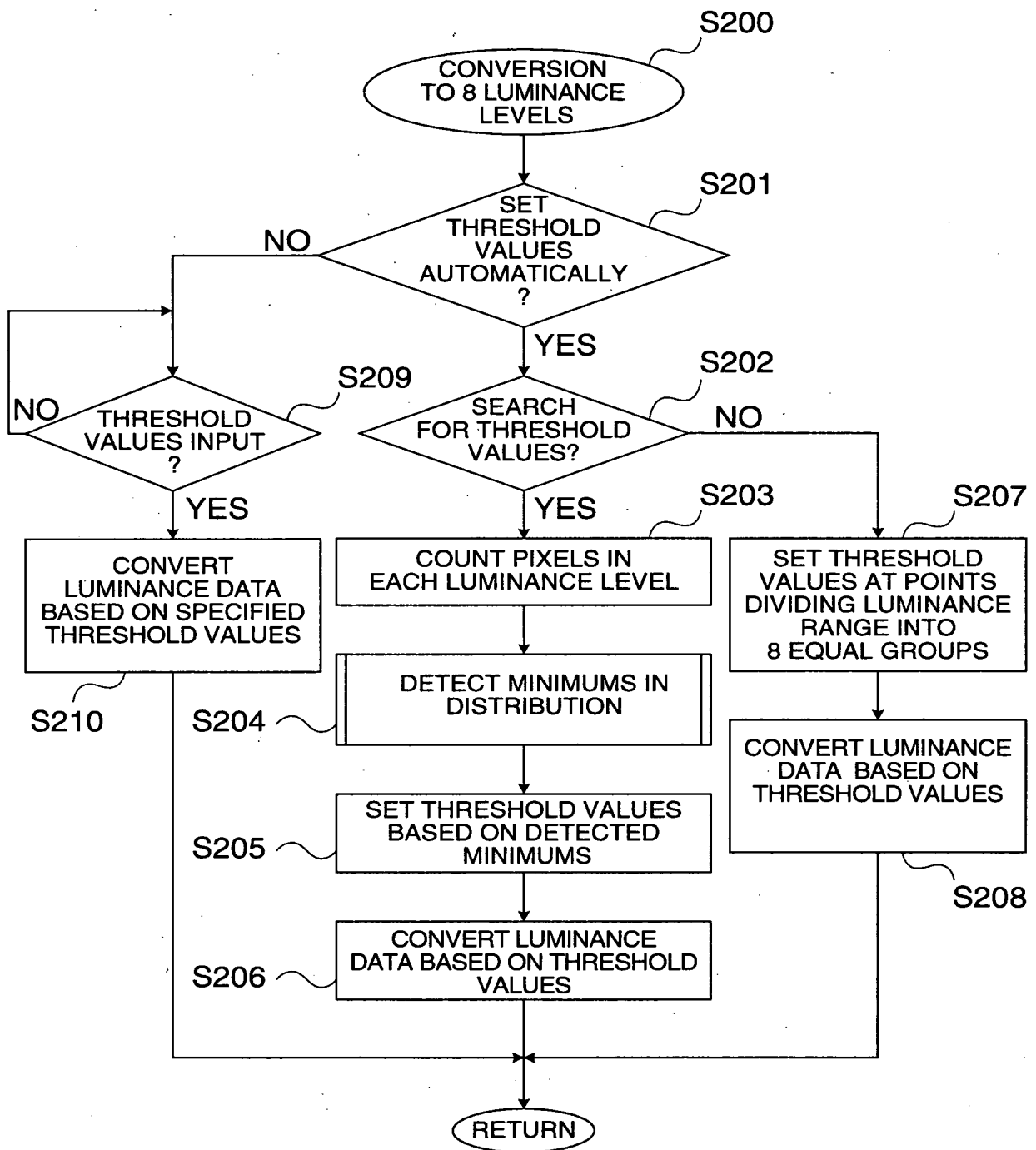


FIG. 10

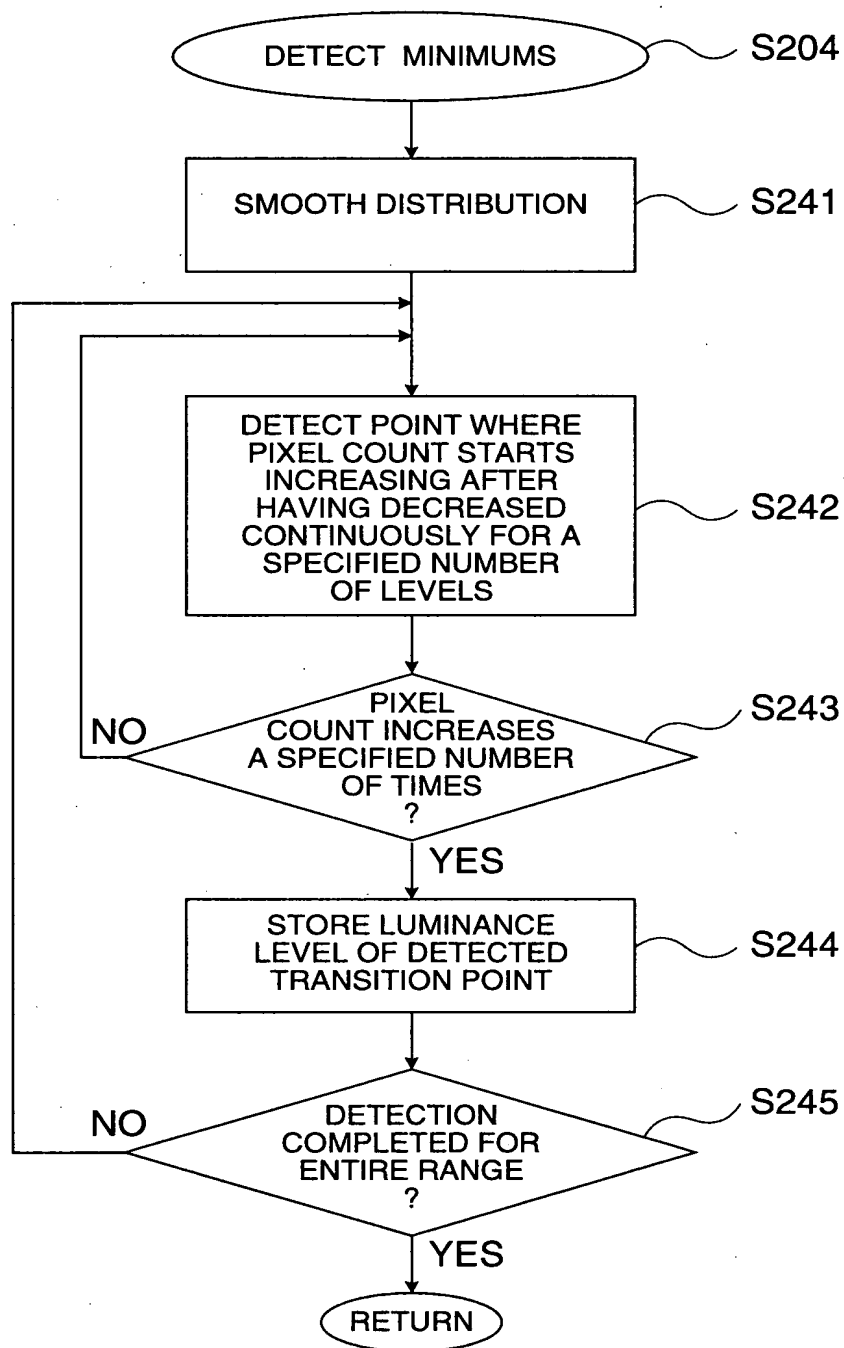


FIG. 11

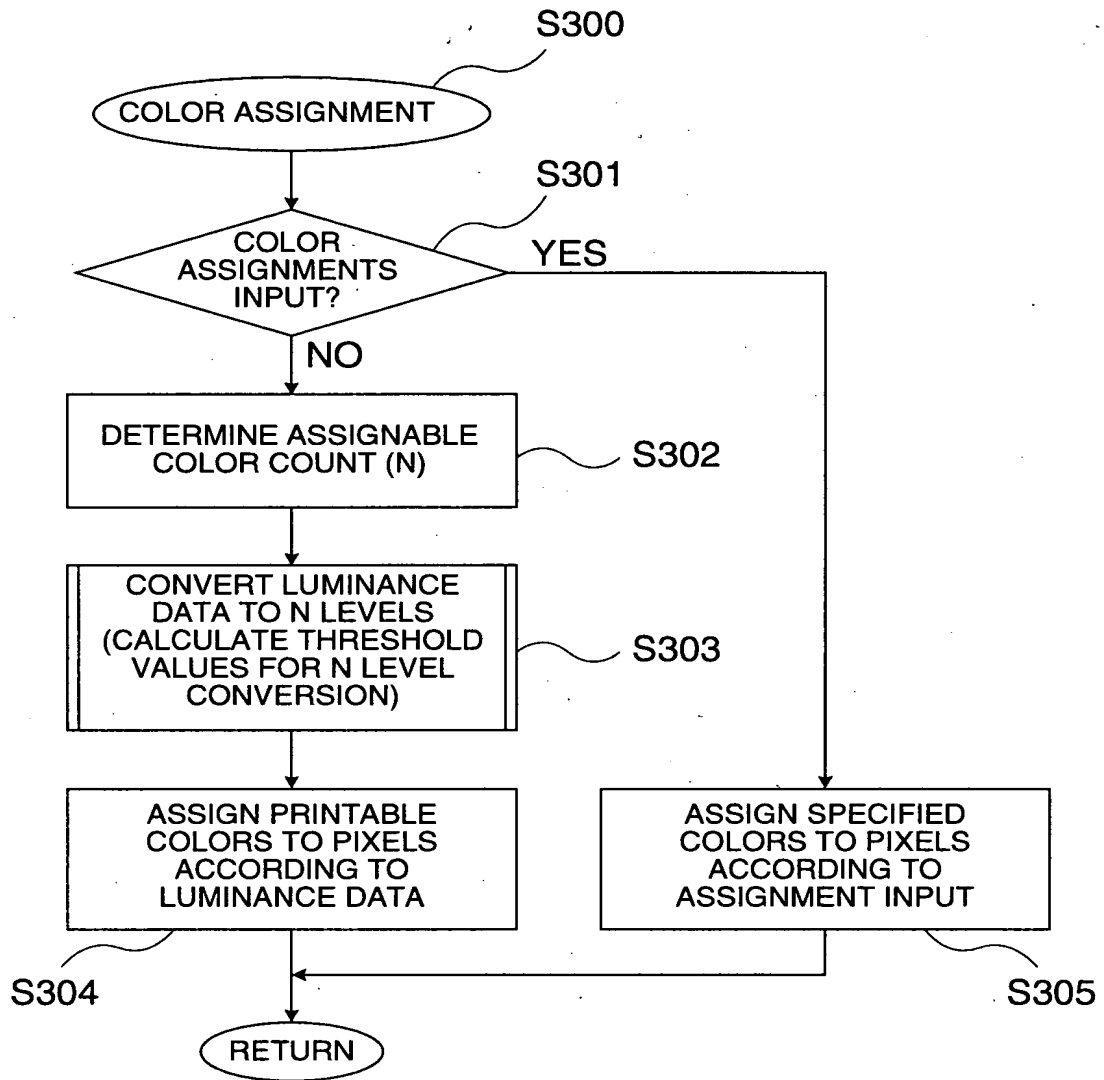
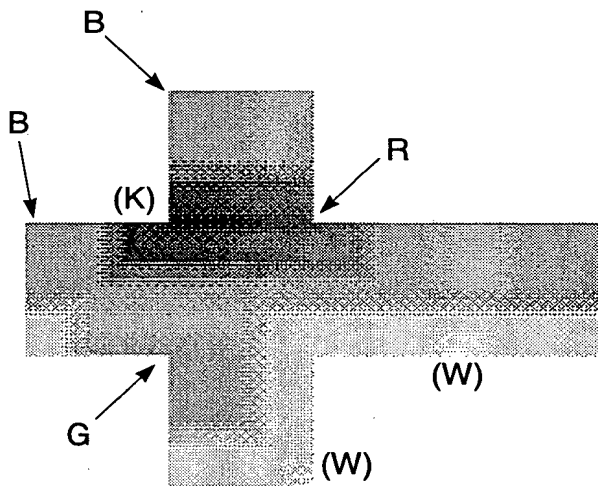
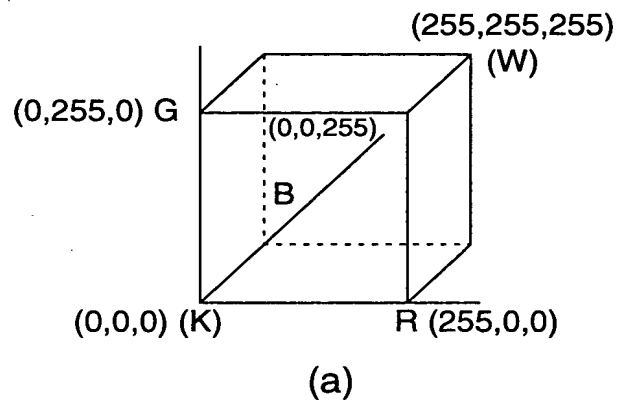


FIG. 12

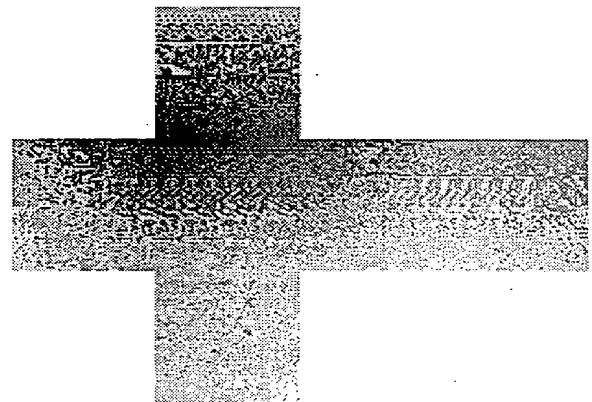
```

graph TD
    S303([3-VALUE CONVERSION]) --> S331[CALCULATE  
REFERENCE VALUE  
TVO]
    S331 --> S332[CALCULATE TV1 =  
TVO * 2/3]
    S332 --> S334[CALCULATE TV2 =  
TVO +  
(7-TVO) * 1/3]
    S334 --> S335[CONVERT LUMINANCE  
DATA TO 3 LEVELS  
BASED ON TV1, TV2]
    S335 --> RETURN([RETURN])
  
```

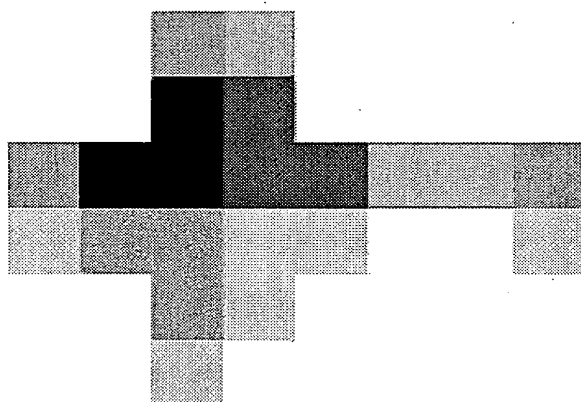
FIG. 13



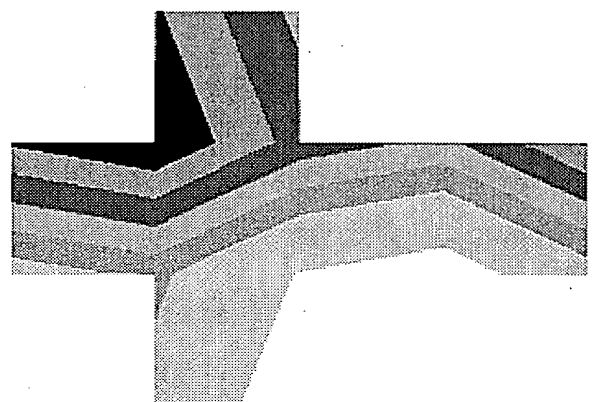
(b)



(c)

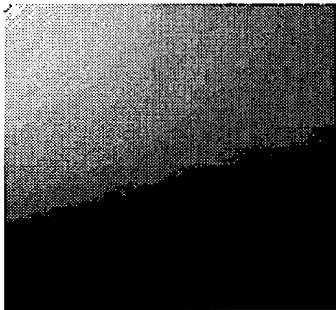


(d)

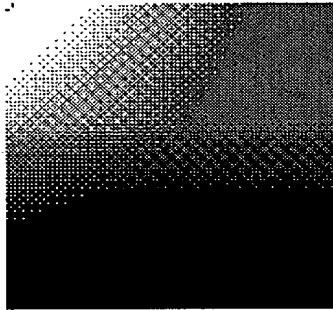


(e)

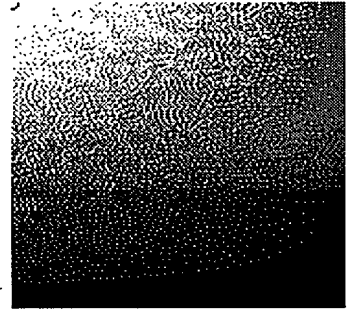
FIG. 14



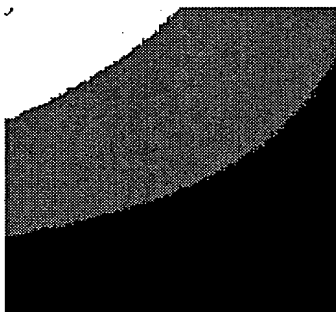
(a)



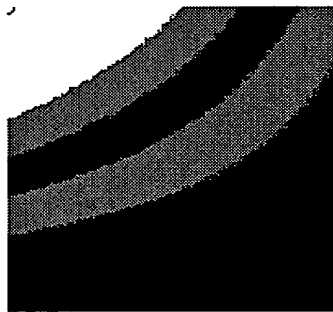
(b)



(c)



(d)

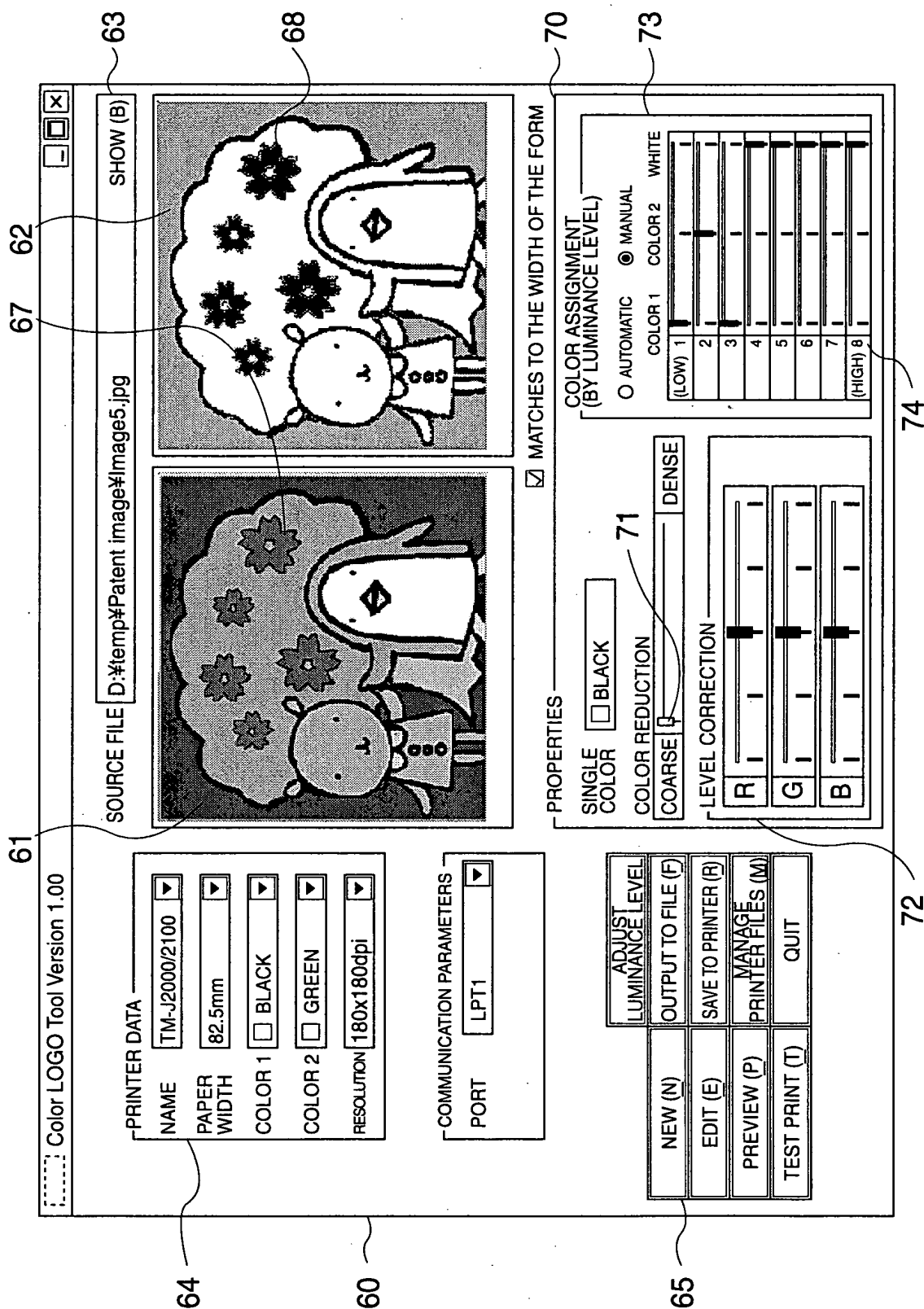


(e)



(f)

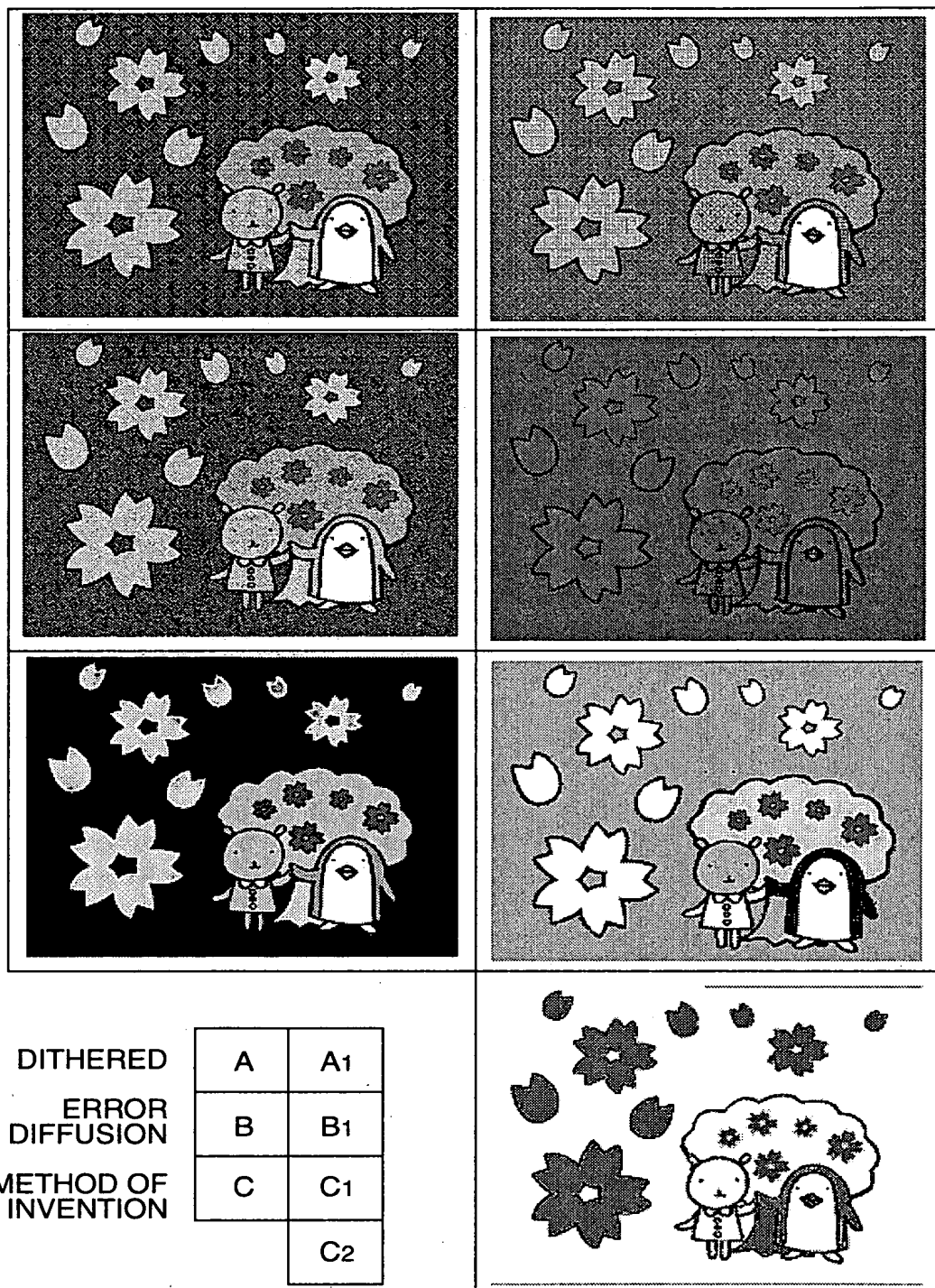
FIG. 15



**FIG. 16**



10000157 121501



(a)

(b)

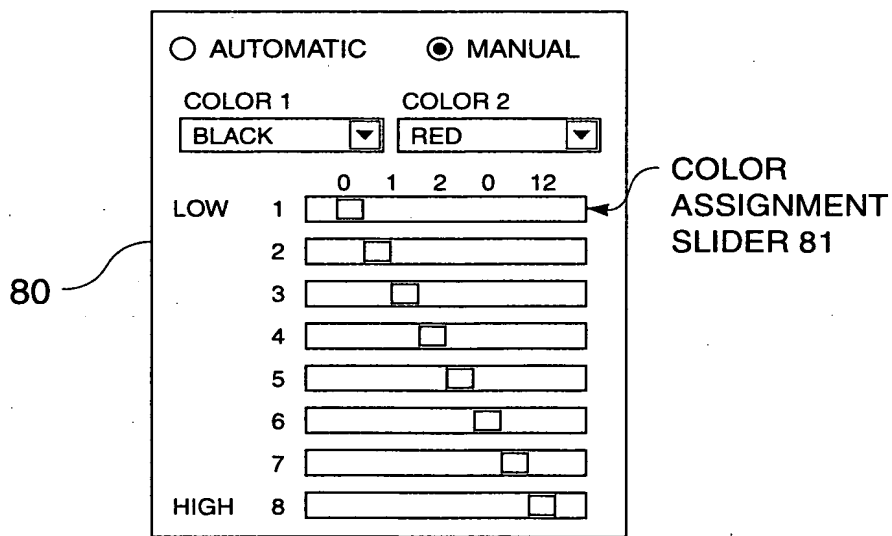
FIG. 17

The diagram illustrates the 15-puzzle state space as a triangular tree. The root node is labeled 1(12). The states are represented by 2x2 grids of circles, some filled (black) and some empty (white). The states are arranged in a triangular pattern, with arrows indicating transitions between them. The moves are labeled 'a', 'b', 'c', and 'd'. The states are labeled with coordinates (x,y,z) where x is the number of filled circles in the top row, y is the number of filled circles in the bottom row, and z is the number of empty circles in the bottom row. The states are arranged in a triangular pattern, with the root at the top and the leaves at the bottom. The states are labeled with coordinates (x,y,z) where x is the number of filled circles in the top row, y is the number of filled circles in the bottom row, and z is the number of empty circles in the bottom row. The states are arranged in a triangular pattern, with the root at the top and the leaves at the bottom. The states are labeled with coordinates (x,y,z) where x is the number of filled circles in the top row, y is the number of filled circles in the bottom row, and z is the number of empty circles in the bottom row.

0 ← a → 1 ← b → 2 ← c → 0 ← d → 12

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(a)



(b)

FIG. 18

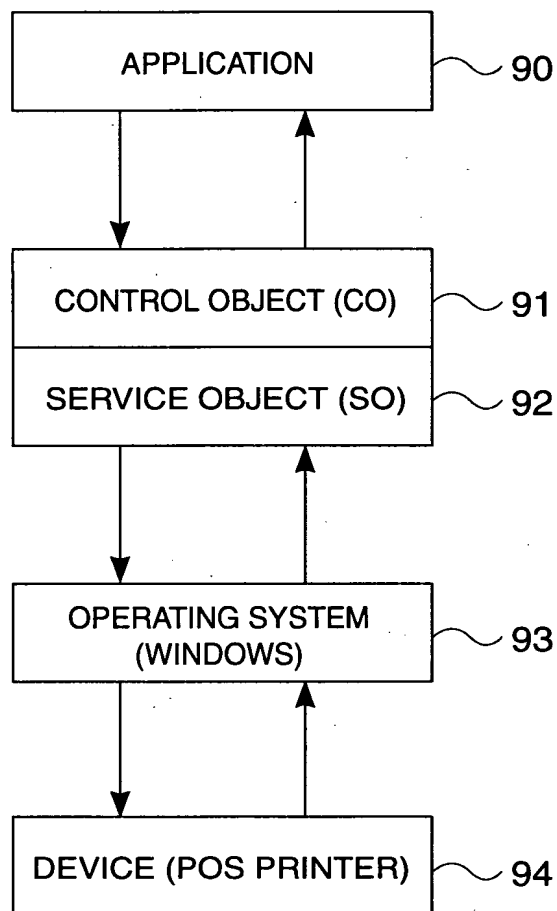


FIG. 19

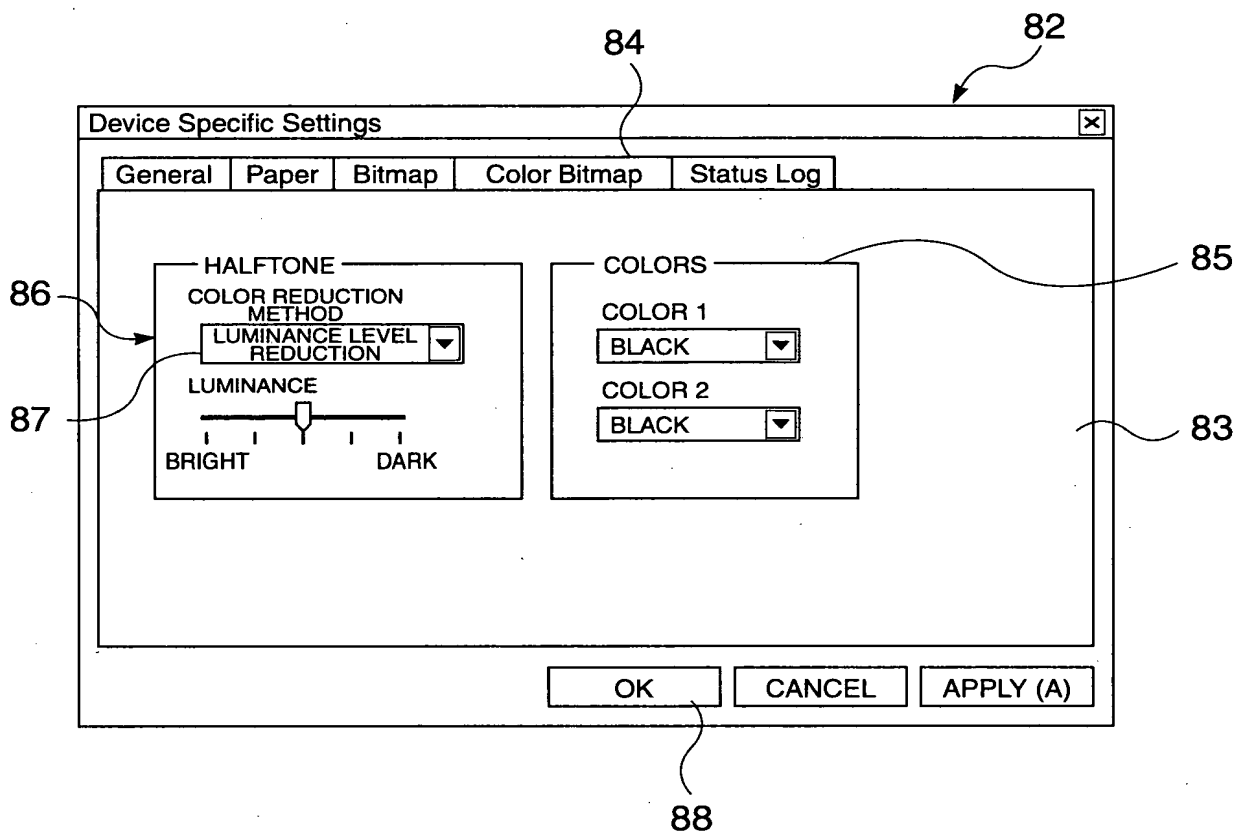


FIG. 20